

File - Delaware

ORIGINAL
(Red)

Llangollen Landfill, New Castle County,
Delaware

Jan. 9, 1976

Albert Montague, Director
Office of Research and Development

Robert J. Blanco, Chief
Water Planning Branch (3WP10)

I have reviewed your memorandum and the material which you forwarded on the above subject. The concerns raised by Merna Hurd, Administrator of New Castle County 208 Program, are without question serious and perhaps understated. The magnitude of the problem may not be fully realized for many years. Some of the factors that will influence the problem are the speed and direction which the contaminated groundwater moves through the aquifers, the physical and chemical characteristics of the aquifer, and society's demand for water from these subsurface reservoirs. As Ms. Hurd pointed out in her letter, "The excavation may have continued into the Patomic sands where the confining clays were absent" and in a subsequent statement that "the general coarse Columbia deposits serve as an infiltration and recharge gallery for the Patomic sands". In light of these statements and the fact that the Columbia Formation is above the Patomic Formation, the likelihood of direct contamination of the Patomic aquifer is extremely high. The problem is thus compounded since two ~~aquifers~~ *aquifers* are in danger of serious contamination by potentially toxic materials, generated and leached from the landfill. Some of the chemicals that are appearing in the leachate include acetone, benzene, chloroform, ethyl benzene, n-hexane and toluene. Based on past EPA analysis, chloroform and toluene were found to be present in higher concentration than the other compounds. As you may know, chloroform and benzene are just two of a number of compounds that were listed in the Preliminary Assessment of Suspect Carcinogens in Drinking Water interim report to Congress, June 1975. Furthermore, the Science Advisory Board was focusing their attention on chloroform, benzene and several other compounds because of their potential toxicity to human health.

For purposes of information, attached please find a memo from the writer (attachment 1) on this subject to appropriate elements in this regional office conveying analytical data on the character of the leachate as determined by the EPA OR&D Athens Laboratory in Georgia and my concerns at that time.

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In addition, attached is the budgetary estimate for FY '76 Landfill Budget for Solid Waste OR&D (attachment 2). It is evident from this tabulation of funds that even if we could secure the entire unobligated budget of approximately \$635,000 and get it committed to address this concern (wishful thinking) it would not even come close to satisfying the funding level necessary to "solve" and not "study" the problem further.

Current estimates to correct this condition range from 15 to 25 million dollars. Delays in taking corrective action will undoubtedly result in progressively higher costs. Furthermore, as the area of contamination widens, it may hinder our ability to effectively negate this contamination process. Certainly, it can be expected to make matters more complex and difficult to deal with. For each days delay, it is estimated that the landfill contributes 200,000 gallons of contaminated water into the aquifer due to infiltrating surface water and groundwater inflow. The latter condition is probably the worst part of this terrible mess. According to Ms. Hurd and other sources, "a large portion of the refuse is below the water table".

Since a great deal is at stake here from both an environmental and public health standpoint, it is incumbent on all pollution control agencies to resolve this problem. Obviously, rather large funds will be required for such an endeavor.

Some options that the State of Delaware may have to secure monies are:

- 1) Float on emergency bond;
- 2) See if this situation can be classified or placed in the category such as disaster so that they may be eligible for Federal assistance.

I believe the latter approach offers the quickest funding arrangement providing it is viable.

Please let me know if you have any questions.

Albert Montague

Attachments

cc: Daniel J. Snyder, III
Dr. A.R. Morris
R. Allen
J. Manwaring
R. Rhodes

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